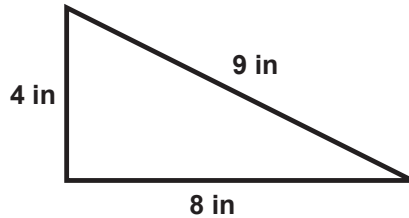


Finding the Perimeter of Triangles

G-PER 1

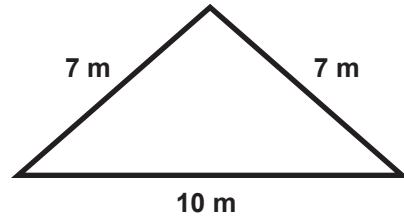
Instructions: Find the perimeter of each triangle by adding up the lengths of its three sides. Don't forget your units!

1



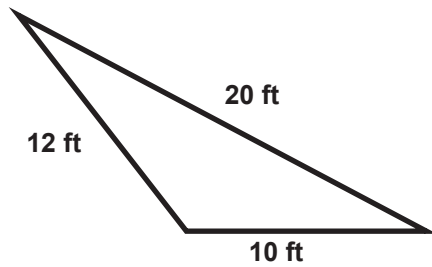
$$8 + 9 + 4 = 21 \text{ in}$$

2



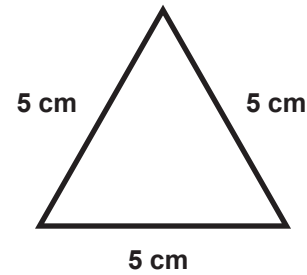
$$7 + 7 + 10 = 24 \text{ m}$$

3



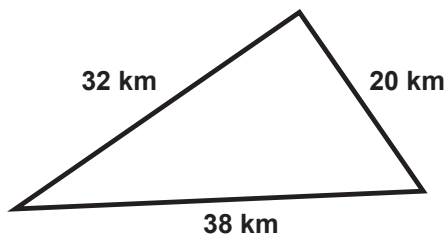
$$10 + 20 + 12 = 42 \text{ ft}$$

4



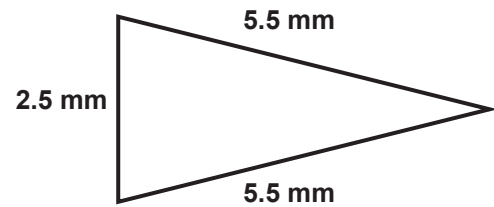
$$5 + 5 + 5 = 15 \text{ cm}$$

5



$$\begin{array}{r} 1 \\ 38 \\ 32 \\ + 20 \\ \hline 90 \end{array} \quad 90 \text{ km}$$

6



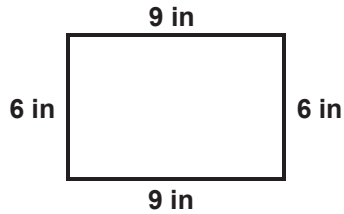
$$\begin{array}{r} 1 \\ 5.5 \\ 5.5 \\ + 2.5 \\ \hline 13.5 \end{array} \quad 13.5 \text{ mm}$$

Finding the Perimeter of Rectangles

G-PER 2

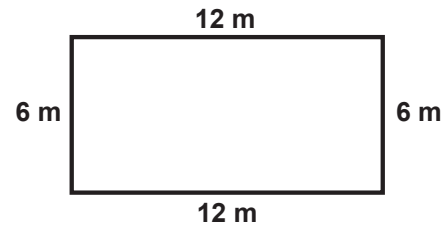
Instructions: Find the perimeter of each rectangle by adding up the lengths of its four sides. Remember that you can add the sides in any order you want to. Don't forget your units!

1



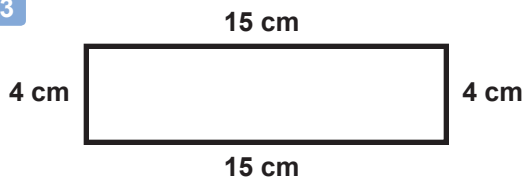
$$\begin{array}{r} 9 + 9 = 18 \\ 6 + 6 = 12 \\ \hline 30 \text{ in} \end{array}$$

2



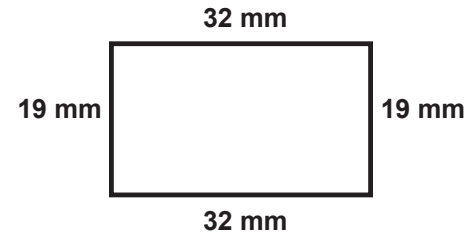
$$\begin{array}{r} 12 + 12 = 24 \\ 6 + 6 = 12 \\ \hline 36 \text{ m} \end{array}$$

3



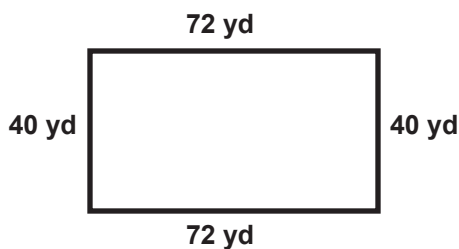
$$\begin{array}{r} 15 + 15 = 30 \\ 4 + 4 = 8 \\ \hline 38 \text{ cm} \end{array}$$

4



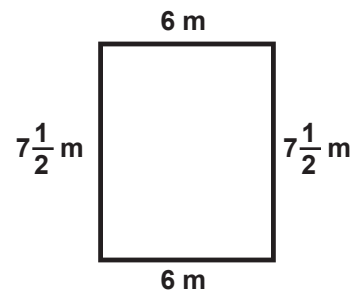
$$\begin{array}{r} 32 + 32 = 64 \\ 19 + 19 = 38 \\ \hline 102 \text{ mm} \end{array}$$

5



$$\begin{array}{r} 72 + 72 = 144 \\ 40 + 40 = 80 \\ \hline 224 \text{ yd} \end{array}$$

6

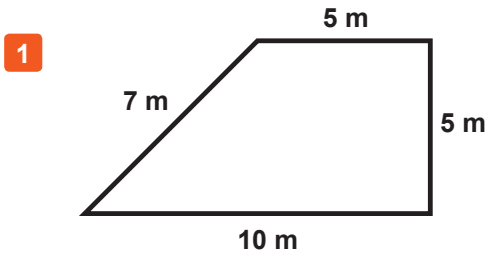


$$\begin{array}{r} 7\frac{1}{2} + 7\frac{1}{2} = 15 \\ 6 + 6 = 12 \\ \hline 27 \text{ m} \end{array}$$

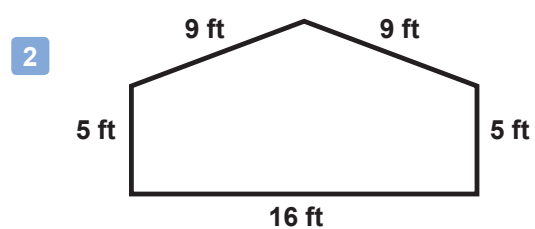
Finding the Perimeter of Polygons

G-PER 3

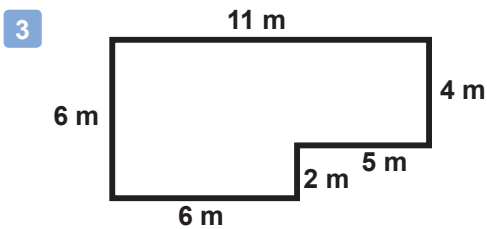
Instructions: Find the perimeter of each polygon by adding up the lengths of all of its sides. You can add the sides in any order you want to. Don't forget your units!



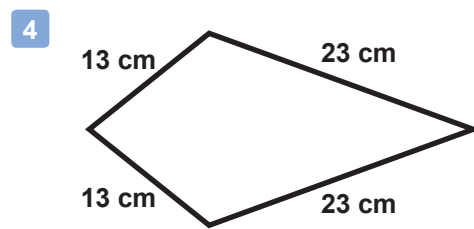
$$5 + 5 + 10 + 7 = 27 \text{ m}$$



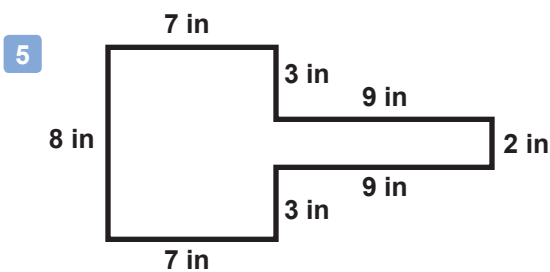
$$\begin{array}{r} 16 + 5 + 5 = 26 \\ 9 + 9 = 18 \\ \hline 44 \text{ ft} \end{array}$$



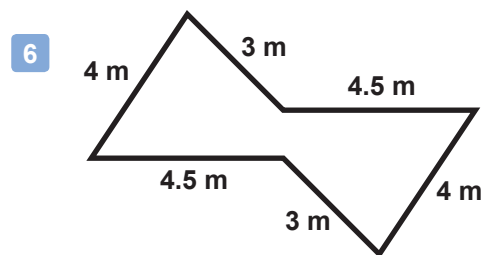
$$\begin{array}{r} 6 + 6 + 11 = 23 \\ 4 + 5 + 2 = 11 \\ \hline 34 \text{ m} \end{array}$$



$$\begin{array}{r} 13 + 13 = 26 \\ 23 + 23 = 46 \\ \hline 72 \text{ cm} \end{array}$$



$$\begin{array}{r} 3 + 7 + 3 + 7 + 8 = 28 \\ 9 + 9 + 2 = 20 \\ \hline 48 \text{ in} \end{array}$$



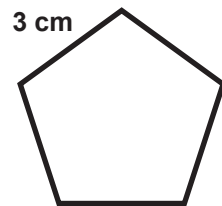
$$\begin{array}{r} 4 + 4 + 3 + 3 = 14 \\ 4.5 + 4.5 = 9 \\ \hline 23 \text{ m} \end{array}$$

Finding the Perimeter of Regular Polygons

G-PER 4

Instructions: Find the perimeter of each **regular** polygon by adding up the lengths of all its sides. Since these are regular polygons, use multiplication as a shortcut. Don't forget your units!

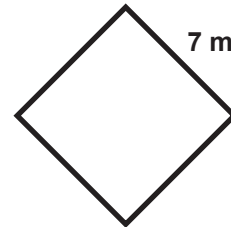
1



5 equal sides, 3 cm per side

$$5 \times 3 = 15 \text{ cm}$$

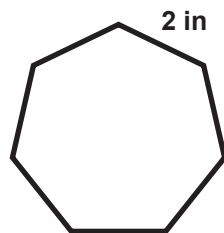
2



4 equal sides, 7 m per side

$$4 \times 7 = 28 \text{ m}$$

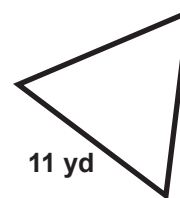
3



7 equal sides, 2 inches per side

$$7 \times 2 = 14 \text{ in}$$

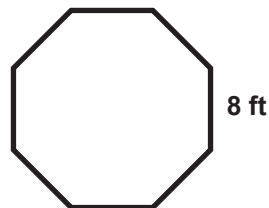
4



3 equal sides, 11 yd per side

$$3 \times 11 = 33 \text{ yd}$$

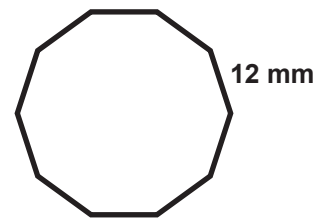
5



8 equal sides, 8 ft per side

$$8 \times 8 = 64 \text{ ft}$$

6



10 equal sides, 12 mm per side

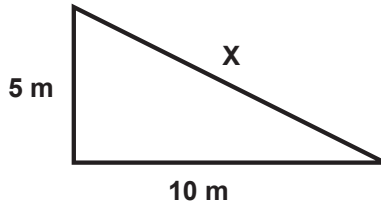
$$10 \times 12 = 120 \text{ mm}$$

Using the Perimeter to Find a Missing Side

G-PER 5

Instructions: Use the perimeter of each polygon to figure out the length of the missing side (X).
(Hint: Subtract the sum of the sides you *do* know from the total perimeter and see what is left over.)

1



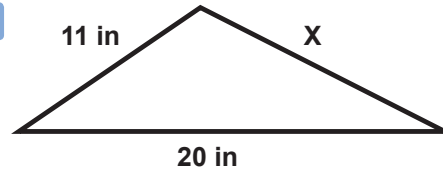
Perimeter = 26 m

$$X = 26 - (5 + 10)$$

$$X = 26 - 15$$

$$X = 11 \text{ m}$$

2



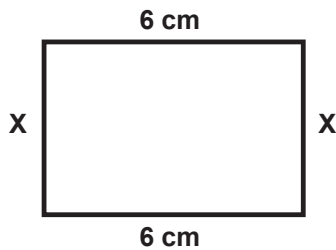
Perimeter = 44 in

$$X = 44 - (20 + 11)$$

$$X = 44 - 31$$

$$X = 13 \text{ in}$$

3



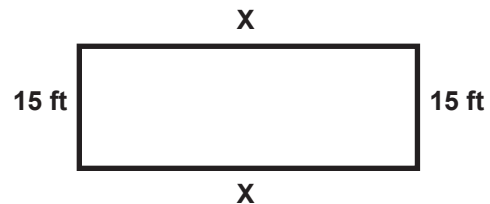
Perimeter = 20 cm

$$20 - (6 + 6) = 8$$

$$8 \div 2 = 4 \text{ so } X = 4 \text{ cm}$$

Since the opposite sides of a rectangle are equal, X must be half of this leftover amount.

4



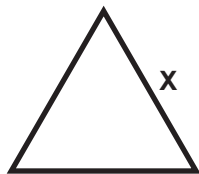
Perimeter = 114 ft

$$114 - (15 + 15) = 84$$

$$84 \div 2 = 42 \text{ so } X = 42 \text{ ft}$$

5

This equilateral triangle has a perimeter of 60 mm. What is the length of side X?



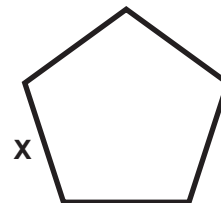
Because all 3 sides are equal, we can just divide the total by 3.

$$X = 60 \div 3$$

$$X = 20 \text{ mm}$$

6

This regular pentagon has a perimeter of 25 km. What is the length of side X?



Because all 5 sides are equal, we can just divide the total by 5.

$$X = 25 \div 5$$

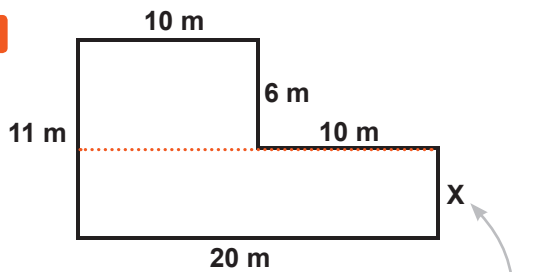
$$X = 5 \text{ km}$$

Perimeter : Missing Information Problems

G-PER 6

Instructions: Find the perimeter of each polygon. (Hint: Use what you *do* know to figure out what you *don't* know.) Remember that you can add up the sides in any order that is easiest for you.

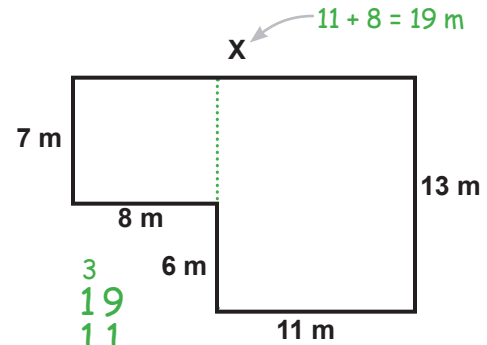
1



$$\begin{array}{r}
 1 \\
 20 \\
 10 \\
 10 \\
 11 \\
 5 \\
 + 6 \\
 \hline
 62 \text{ m}
 \end{array}$$

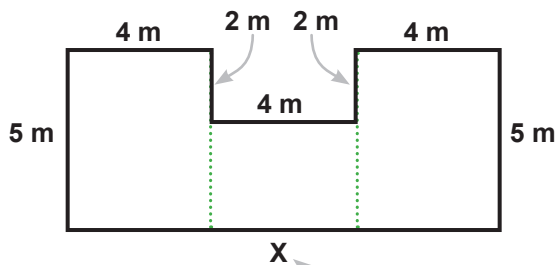
$$11 - 6 = 5 \text{ m}$$

2



$$\begin{array}{r}
 3 \\
 19 \\
 11 \\
 13 \\
 7 \\
 8 \\
 + 6 \\
 \hline
 64 \text{ m}
 \end{array}$$

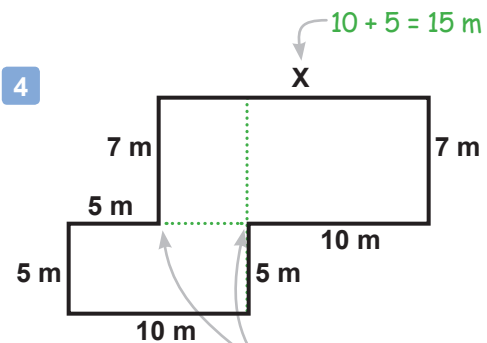
3



$$\begin{array}{r}
 2 \\
 12 \\
 5 \\
 5 \\
 4 \\
 4 \\
 4 \\
 2 \\
 + 2 \\
 \hline
 38 \text{ m}
 \end{array}$$

$$3 \times 4 = 12 \text{ m}$$

4



$$\begin{array}{r}
 3 \\
 15 \\
 10 \\
 10 \\
 5 \\
 5 \\
 5 \\
 7 \\
 + 7 \\
 \hline
 64 \text{ m}
 \end{array}$$

This length must be 5 m because $10 - 5 = 5$

That means X must be $10 + 5$ which is 15 m